

REMARKS

The Office Action dated February 20, 2004, has been received and carefully noted. The above amendments, and the following remarks, are submitted as a full and complete response thereto. No new matter has been added. Claims 2-7 and 9-11 are presently pending in the above-cited application and are again submitted for consideration.

Claims 2-7 and 9-11 are presently pending in the above-cited application and have been examined. Additionally, the Office indicated that claims 2, 3, 6 and 9-11 have been allowed. Applicants wish to thank the Examiner for the allowance of the above claims. Claims 1 and 8 have been cancelled through the above amendments and claim 4 has been amended such that claim 4 now depends from claim 2. As such, Applicants respectfully assert that claim 4 should be indicated as being allowed as well. Claims 2-7 and 9-11 are again respectfully submitted for consideration.

Claims 1, 4, 5, 7 and 8 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Carvey et al.* (U.S. Patent No. 6,359,879). Of the rejected claims, the rejection against claims 1, 4 and 8 should now be moot. The above rejection, as asserted against claims 5 and 7, is respectfully traversed, as discussed below.

The present invention, according to claim 5, from which claim 7 depends, is directed to a method for load balancing in a link aggregation environment, with multiple ports of a network switch being trunked together to form a single logical link. The method includes the steps of determining a length of a first frame and a length of a second frame entering the link aggregation environment, determining a flow rate of the first frame and the second frame entering the link aggregation environment, determining

if the flow rate exceeds a predetermined flow rate threshold, determining if the first frame and the second frame are candidates for link switching and switching a transmission link for at least a portion of a packet flow for the flow rate for the second frame from a first transmission port to a second transmission port, of the multiple ports.

As discussed above, the method provides for redirecting at least a portion of the packet flow to a second port, where the ports are trunked together to form a single logical link. The link aggregation environment is discussed in greater detail in the present specification at page 109 and is defined under IEEE 802.3ad. Such methodology allows for greater bandwidth to be handled by a single logical link that is greater than the bandwidth for a single port. The method recited in claim 5 should be contrasted with the applied prior art, as discussed below.

The sole applied prior art reference is *Carvey et al.*, where the reference is directed to composite trunking. An Internet router treats plural output ports with a common destination as a composite port and a routing table uses the IP address to determine a composite trunk to which the packet is to be forwarded. A forwarding table identifies a route along a routing fabric within the router to a specific output port of the composite port. Output ports and fabric routes are selected to maintain order within a flow by routing the flow along a single fabric route to a single output trunk. The forwarding table may favor output ports which are nearest to a packet input port, and the forwarding table may be modified to dynamically balance load across the trunks of a composite trunk.

Claim 5 recites, in part, “determining a length of a first frame and a length of a second frame entering the link aggregation environment,” and determining a flow rate

based on those frames. *Carvey et al.* discloses that the “output port selector is able to balance load across the trunks of a composite trunk and may even providing dynamic balancing by changing port selection in response to changes in load.” However, *Carvey et al.* does not specify how that load is calculated. As such, Applicants respectfully assert that *Carvey et al.* fails to teach “determining a length of a first frame and a length of a second frame entering the link aggregation environment,” as recited in claim 5. In other words, *Carvey et al.* fails to disclose the examination of any frame or packet to determine length.

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since *Carvey et al.* fails to teach all of the elements of claim 5, Applicants respectfully assert that the rejection of claim 5 is improper and should be withdrawn.

Additionally, Applicants also respectfully assert that *Carvey et al.* fails to suggest all of the elements of claim 5. *Carvey et al.* does not disclose the measurement of the lengths of frames and is only concerned with load balancing. A load on an output queue in a network switch can be measured through various metrics. The queue can be measured in terms of the number of packets it contains or memory allocation space that the packets take up. Thus, in *Carvey et al.*, in order to accomplish its goal of balancing loads between composite trunks, there is no requirement that the lengths of frames be determined.

Additionally, *Carvey et al.* is specifically concerned with multiplexing multiple channels on a single optical fiber (column 1, lines 59-67) and it is not clear what benefit would accrue to the system in *Carvey et al.* of measuring the length of frames or packets. *Carvey et al.* is more concerned with selecting an output port based on the distance to be traversed on the routing fabric (column 3, lines 7-9). Thus, Applicants respectfully assert that one of ordinary skill in the art would not have been motivated to modify the teachings of *Carvey et al.* to reach the subject matter of claim 5.

As such, Applicants respectfully submit that claim 5 should be allowed because it recites subject matter that is neither taught nor suggested by the applied prior art reference. Likewise, claim 7 should also be found to be allowable over the cited prior art reference for at least its dependence on claim 5. Given the allowance of claims 2, 3, 6 and 9-11, and the dependence of claim 4 on claim 2, it is therefore respectfully requested that all claims 2-7 and 9-11 be allowed and that this application be allowed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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